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## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christopher Francis on 12/17/10.

The application has been amended as follows:

In claim 22, after "claims 20", 'and' has been deleted and -- or -- has been insert.

### **Allowable Subject Matter**

Claims 1-3,12 and 14-29 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record either taken singularly or in combination fail to disclose the invention as claimed. In particular reference to Bureau et al. (US 2002/0088246) is the closest prior art but fail to disclose that in a first of the end regions, first and second openings for the circulation of the first fluid in the two directions respectively, and a third opening for the circulation of the second fluid in the first direction, and in the second of the second end regions, a fourth opening for the circulation of the second fluid in the second direction, in combination with other limitation in the claims. .

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/  
Primary Examiner, Art Unit 3744